

EXHIBIT 4

FILED UNDER SEAL

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

SONOS, INC.,

Plaintiff,

vs.

Case No. 3:21-CV-07559-WHA

GOOGLE LLC,

Defendant.

-AND-

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

GOOGLE LLC,

Plaintiff,

vs.

Case No. 3:20-CV-06754-WHA

SONOS, INC.,

Defendant.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

REMOTE VIDEOTAPED DEPOSITION BY VIRTUAL ZOOM OF
DOUGLAS SCHMIDT

Thursday, February 2, 2023

Reported By: Lynne Ledanois, CSR 6811


Job No. 5686109

<p>1 A Let's see. The devices that I tested for 12:22PM 2 this -- the tests that I mention here were the ones 3 that are described in the Section 9 entitled "Overview 4 of Testing" appearing towards the bottom of Page 31. 5 Q Okay. And it's your opinion that you 12:23PM 6 don't need to test every one of the accused devices 7 in order to provide an infringement opinion; is that 8 right? 9 A Let's see where I say that. I'm not sure if 10 I say that but -- 12:23PM 11 Q I'm just asking for your opinion. 12 Do you need to test every single accused 13 device in order to render an opinion regarding the 14 infringement or non-infringement of the accused 15 YouTube application? 12:23PM 16 A So based on the material in Paragraph 110 17 that we talked about before, it's my understanding, 18 based on the documents I reviewed, the testimony that 19 I read from various Google witnesses in this case that 20 there is no relevant functionality of the -- no 12:24PM 21 relevant functional differences between the different 22 OS versions and there's also no relevant differences 23 between the functionality of the accused casting and 24 stream transfer technologies within the period that we 25 were discussing here, which was September 2020. 12:24PM Page 122</p>	<p>1 provided by a cloud-based computing system 12:26PM 2 associated with a cloud-based media service'. 3 Do you see that? 4 A I do. 5 Q Is that still your opinion? 12:26PM 6 A I believe so. I talk about that in more 7 detail in -- hold on a second. I show other examples 8 of this in other parts of my other reports. 9 Q But I guess my question: So that's still 10 your opinion, though; right? 12:26PM 11 A Right. As I say, in my reply report in 12 Paragraph 49 I show some -- a nice example of this 13 where there is a sort of a projection or subset or 14 window of sections of the Watch Next queue which is 15 available on the YouTube Sender, but that's just a 12:27PM 16 projection from the actual Watch Next queue that I 17 reference in other parts of my report referring to the 18 remote playback queue. 19 Q Can a device that stores a local playback 20 queue also be configured for a playback of a remote 12:27PM 21 playback queue? 22 MR. LEE: Objection, form. 23 THE WITNESS: I'm not sure what you mean. 24 BY MR. HEFAZI: 25 Q So if a user device stores a local 12:27PM Page 124</p>
<p>1 So based on that, I have not seen Google 12:24PM 2 claim that there's differences between the different 3 devices, so I don't believe that I would have to 4 test each and every one of them in order to find the 5 same behavior. 12:24PM 6 Q Okay. 7 A Relative to the infringement claims that are 8 at issue in this case. There could be other 9 differences that are unrelated to the infringement 10 claims. 12:25PM 11 Q Okay. Let's go back to opening report -- 12 your opening report. 13 A Okay. 14 Q If you -- this is Exhibit 2. If you can 15 go to Paragraph 480. 12:25PM 16 A I'm there. 17 Q You say in this paragraph, I'm looking at 18 the third sentence, "just because a sender device 19 might maintain a local copy of a queue does not 20 necessarily mean that there is not also" -- sorry, 12:25PM 21 strike that. Let me read this again. 22 You say in Paragraph 480 of your opening 23 report, "just because a sender device might maintain 24 a local copy of a queue does not necessarily mean 25 that there is not also 'a remote playback queue 12:26PM Page 123</p>	<p>1 playback queue, can it also be configured for 12:27PM 2 playback of a remote playback queue? 3 MR. LEE: Same objection. 4 THE WITNESS: Well, again, I think that 5 that is -- I think that's explained or shown in more 12:27PM 6 detail on Paragraph 49 in my reply report which 7 demonstrates a scenario where there is a YouTube 8 Sender -- this is based on Google's documents, where 9 a YouTube Sender initiates playback from a long 10 playlist in which the sender has to make multiple 12:28PM 11 calls to the Watch Next cloud server, part of the 12 Watch Next queue as I refer to in my reports, to 13 obtain windows or sections of the Watch Next queue. 14 And the diagram there basically shows I 15 think as an example where there is a sort of a local 12:28PM 16 portion of this queue that's on the client device, 17 the sender, and that's being fed by making calls to 18 the Watch Next -- Watch Next request and the 19 GetWatchNext responses and so on that are taking 20 place here to allow the remote playback queue to 12:29PM 21 present an endless set of videos which are then 22 provided back to the client as a subset of that 23 overall -- as windows into the overall queue. 24 BY MR. HEFAZI: 25 Q Okay. So just to summarize, I think your 12:29PM Page 125</p>

<p>1 A I'm there. 12:35PM</p> <p>2 Q Do you see it says, "the Sender's local</p> <p>3 queue is loaded with one or more 'video IDs' for the</p> <p>4 initial user-selected media item or collection of</p> <p>5 media items and one or more video IDs for 12:36PM</p> <p>6 service-recommended items seeded by the initial user</p> <p>7 selection." Correct?</p> <p>8 A I see what it says, yes.</p> <p>9 Q The sender refers to a user device with an</p> <p>10 accused YouTube application; right? 12:36PM</p> <p>11 A So I think the discussion here on --</p> <p>12 starting on Paragraphs 127 is materially the same to</p> <p>13 the paragraphs I pointed you to earlier when you first</p> <p>14 asked me this line of questioning, which appeared on</p> <p>15 Paragraph 49 in my reply report. 12:36PM</p> <p>16 This is showing the projection or window I</p> <p>17 think it was called. You look at the figure at the</p> <p>18 top of Page 38, it's showing how these are a window</p> <p>19 or a subset of the contents that are being</p> <p>20 downloaded from the remote playback queue. 12:37PM</p> <p>21 I don't think I used the word "local</p> <p>22 playback queue" here. I think I referred to it as a</p> <p>23 local queue that's, as described in Paragraph 129,</p> <p>24 loaded with one or more video IDs for the initial</p> <p>25 user-selected media. 12:37PM</p> <p>Page 130</p>	<p>1 That's basically what's shown in the 12:39PM</p> <p>2 diagram. And it's showing how the calls have to go</p> <p>3 back to the cloud to the Watch Next queue in order</p> <p>4 to obtain the next round of elements.</p> <p>5 BY MR. HEFAZI: 12:39PM</p> <p>6 Q Can a device be configured for play back</p> <p>7 of a remote playback queue and a local playback</p> <p>8 queue at the same time?</p> <p>9 A Again, I'm not sure if I've offered an</p> <p>10 opinion in the context of the '033 patent as it 12:39PM</p> <p>11 relates to local playback queue versus remote playback</p> <p>12 queue.</p> <p>13 I think as I've said, there is a remote</p> <p>14 playback queue as I've identified a number of times</p> <p>15 which is the so-called Watch Next queue as I talk 12:39PM</p> <p>16 about in Paragraph 128.</p> <p>17 And there's also this thing that the</p> <p>18 YouTube sender has, which is a local queue, which is</p> <p>19 loaded with video IDs it obtains from the remote</p> <p>20 playback queue, the Watch Next queue. 12:39PM</p> <p>21 Q So you don't have an opinion about whether</p> <p>22 a device can be configured for playback on a local</p> <p>23 playback queue and a remote playback queue at the</p> <p>24 same time; is that right?</p> <p>25 A I don't recall having an opinion on that. 12:40PM</p> <p>Page 132</p>
<p>1 And then I talk about how that's updated 12:37PM</p> <p>2 over time using various techniques.</p> <p>3 Q So the accused YouTube applications store</p> <p>4 a local VQ on the mobile device; correct?</p> <p>5 MR. LEE: Objection to form. 12:37PM</p> <p>6 THE REPORTER: Nima, did you say "VQ,"</p> <p>7 Victor?</p> <p>8 MR. HEFAZI: I don't actually remember.</p> <p>9 Let me rephrase and reask the question.</p> <p>10 Q A user device running the accused YouTube 12:38PM</p> <p>11 applications loads its local queue with items from a</p> <p>12 YouTube server; right?</p> <p>13 MR. LEE: Objection to form.</p> <p>14 THE WITNESS: So what is -- what is shown</p> <p>15 here in the discussion on Pages 37 and 38 starting 12:38PM</p> <p>16 roughly around Paragraph 120 and continuing down to</p> <p>17 include Paragraph 129, based on the diagram from the</p> <p>18 Google documentation, the sender's local queue,</p> <p>19 which is the YouTube application, is often loaded</p> <p>20 with one or more video IDs for the initial 12:38PM</p> <p>21 user-selected media item or a collection of media</p> <p>22 items.</p> <p>23 And then also one or more video IDs for</p> <p>24 service-recommended items seeded for the initial</p> <p>25 selection. 12:39PM</p> <p>Page 131</p>	<p>1 If you can point me to somewhere in my report that 12:40PM</p> <p>2 uses those terms, I'll be happy to take a look at it.</p> <p>3 But I think as I mentioned when we first</p> <p>4 started talking about this, the material related to</p> <p>5 that diagram, which again also occurs in my reply 12:40PM</p> <p>6 report, demonstrates what I think I'm describing</p> <p>7 here about how there is a remote playback queue,</p> <p>8 which is the Watch Next queue, which is then used</p> <p>9 to -- it's loaded with some window or some view into</p> <p>10 the remote playback queue. 12:40PM</p> <p>11 Q Can a device be configured to play back</p> <p>12 both a local queue and a remote playback queue at</p> <p>13 the same time?</p> <p>14 MR. LEE: Objection, form.</p> <p>15 THE WITNESS: I'm not sure what you mean 12:41PM</p> <p>16 by that. Sorry, go ahead.</p> <p>17 BY MR. HEFAZI:</p> <p>18 Q You said that the accused YouTube</p> <p>19 application had a local queue; right?</p> <p>20 A I think I show some examples of diagrams 12:41PM</p> <p>21 here from Google documentation that shows the way in</p> <p>22 which this works in general.</p> <p>23 Q Okay. And so in your opinion, is the user</p> <p>24 device configured to play back its local queue?</p> <p>25 A Again, I'm not sure how you're using the 12:41PM</p> <p>Page 133</p>

<p>1 showdown, the court disagreed with your 12:52PM 2 interpretation of the term "playback queue" and your 3 infringement opinions? 4 A So it's my understanding that there is a 5 court order that's at issue in the '033 patent, which 12:52PM 6 is what I've referred to a couple of times, about what 7 constitutes a playback queue. 8 And that's the -- that's the construction 9 that I have been applying in the context of the '033 10 patent. So, yes, I'm aware of that. 12:53PM 11 Q Let's go to Exhibit 2 real quick. And 12 then we can take a break. But I have a couple of 13 just final questions here. 14 In Exhibit 2, you have a section called 15 "Claim Construction" starting at Paragraph 112. 12:53PM 16 A All right. Let me go there. 17 Yes, I see that. 18 Q Does this section describe all of the 19 requirements of a playback queue under the court's 20 construction? 12:53PM 21 A My opening report describes all the sections 22 that the court has ordered construe or involve a 23 playback queue. As to whether that particular section 24 describes them all, I'm not sure. 25 But the body of the corpus, the entirety 12:54PM Page 142</p>	<p>1 report, the opening report covers them. 12:55PM 2 And at the time of the opening report, I 3 was not really aware that Dr. B was going to try to 4 come up with different interpretations of playback 5 queue that were inconsistent with the court's order. 12:56PM 6 So when I discovered that after reading 7 his opening report, which of course I didn't have 8 before I served my opening report, then I was more 9 explicit in reiterating what the court's order was 10 and making it clear why I thought he was not 12:56PM 11 being -- he was not conforming to those 12 characteristics. 13 But those characteristics are indeed 14 embodied in my analysis in my opening report. 15 MR. HEFAZI: Okay. Let's take a break for 12:56PM 16 lunch. 17 THE VIDEOGRAPHER: We're off the record. 18 It's 12:56 p.m. 19 (Recess taken.) 20 THE VIDEOGRAPHER: We're back on the 1:33PM 21 record. It's 1:33 p.m. 22 BY MR. HEFAZI: 23 Q Now, Dr. Schmidt, the court construed the 24 term "playback queue" as a list of multimedia 25 content selected for playback; is that correct? 1:34PM Page 144</p>
<p>1 of my opening report does indeed address all four of 12:54PM 2 the playback queue characteristics that were ordered 3 by the court. 4 Q Do you mention any of those four 5 characteristics in your section on claim 12:54PM 6 construction here in the opening report? 7 A Again, I don't recall whether I mentioned 8 them in that section. But they appear throughout the 9 opening report. 10 Q Did you say anywhere in the opening report 12:54PM 11 that the term "playback queue" has an additional set 12 of characteristics? 13 A Again, as I describe the characteristics of 14 a playback queue throughout my analysis in my opening 15 report, I touch on all four of the characteristics 12:55PM 16 that are put forth in the court's order. 17 Q My question is a little bit different. 18 Did you -- at any point in your opening 19 report, can you point me to anywhere where you 20 stated that the court's construction of playback 12:55PM 21 queue required those four characteristics that you 22 identified in your rebuttal and reply reports? 23 A Again, as I mentioned a couple of times now, 24 the characteristics that the court put forth in the 25 order are contained in various places in my opening 12:55PM Page 143</p>	<p>1 A That's correct, with some other 1:34PM 2 characteristics that we were talking about earlier. 3 Q Okay. And we'll get to those in a second. 4 But to start, you stated for purposes of 5 the '033 patent that you will be interpreting the 1:34PM 6 court's construction as a list of one or more media 7 items selected for playback; correct? 8 A So I think I noted this in my opening 9 report, but in my reply report I also mention that the 10 '033 patent claims don't recite the term "multimedia 1:34PM 11 content" as the -- as opposed to the '615 patent 12 claims which did use the word "multimedia content." 13 So the '033 patent claims talk about a 14 media item and, therefore, I interpreted the court's 15 construction of playback queue, which is provided in 1:35PM 16 the context of Claim 13 in the '615 patent, as a 17 list of one or more media items selected for 18 playback. 19 However, as I also talk about in 20 Paragraph 112 of my reply report, my opinions would 1:35PM 21 remain the same under the exact construction of 22 playback queue provided in the context of Claim 13 23 in the '615 patent. 24 And that's because a POSITA would 25 understand that "multimedia content" is synonymous 1:35PM Page 145</p>

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<p>1 I, LYNNE M. LEDANOIS, a Certified</p> <p>2 Shorthand Reporter of the State of California, do</p> <p>3 hereby certify:</p> <p>4 That the foregoing proceedings were taken</p> <p>5 before me at the time and place herein set forth;</p> <p>6 that a record of the proceedings was made by me</p> <p>7 using machine shorthand which was thereafter</p> <p>8 transcribed under my direction; that the foregoing</p> <p>9 transcript is a true record of the testimony given.</p> <p>10 Further, that if the foregoing pertains to</p> <p>11 the original transcript of a deposition in a Federal</p> <p>12 Case, before completion of the proceedings, review</p> <p>13 of the transcript [] was [x] wasn't requested.</p> <p>14 I further certify I am neither financially</p> <p>15 interested in the action nor a relative or employee</p> <p>16 of any attorney or party to this action.</p> <p>17 IN WITNESS WHEREOF, I have this date</p> <p>18 subscribed my name.</p> <p>19 Dated: February 4, 2023</p> <p>20</p> <p>21</p> <p>22</p> <p>23  LYNNE MARIE LEDANOIS</p> <p>24 CSR No. 6811</p> <p>25</p> <p style="text-align: right;">Page 290</p>	<p>1 __ Federal R&S Requested (FRCP 30(e)(1)(B)) – Locked .PDF</p> <p>2 Transcript - The witness should review the transcript and</p> <p>3 make any necessary corrections on the errata pages included</p> <p>4 below, notating the page and line number of the corrections.</p> <p>5 The witness should then sign and date the errata and penalty</p> <p>6 of perjury pages and return the completed pages to all</p> <p>7 appearing counsel within the period of time determined at</p> <p>8 the deposition or provided by the Federal Rules.</p> <p>9 _x_ Federal R&S Not Requested - Reading & Signature was not</p> <p>10 requested before the completion of the deposition.</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p style="text-align: right;">Page 292</p>
<p>1 NIMA HEFAZI, ESQ.</p> <p>2 nimahefazi@quinnemanuel.com</p> <p>3 February 4, 2023</p> <p>4 RE: SONOS, INC. vs. GOOGLE LLC</p> <p>5 February 2, 2023, DOUGLAS SCHMIDT, JOB NO. 5686109</p> <p>6 The above-referenced transcript has been</p> <p>7 completed by Veritext Legal Solutions and</p> <p>8 review of the transcript is being handled as follows:</p> <p>9 __ Per CA State Code (CCP 2025.520 (a)-(e)) – Contact Veritext</p> <p>10 to schedule a time to review the original transcript at</p> <p>11 a Veritext office.</p> <p>12 __ Per CA State Code (CCP 2025.520 (a)-(e)) – Locked .PDF</p> <p>13 Transcript - The witness should review the transcript and</p> <p>14 make any necessary corrections on the errata pages included</p> <p>15 below, notating the page and line number of the corrections.</p> <p>16 The witness should then sign and date the errata and penalty</p> <p>17 of perjury pages and return the completed pages to all</p> <p>18 appearing counsel within the period of time determined at</p> <p>19 the deposition or provided by the Code of Civil Procedure.</p> <p>20 __ Waiving the CA Code of Civil Procedure per Stipulation of</p> <p>21 Counsel - Original transcript to be released for signature</p> <p>22 as determined at the deposition.</p> <p>23 __ Signature Waived – Reading & Signature was waived at the</p> <p>24 time of the deposition.</p> <p>25</p> <p style="text-align: right;">Page 291</p>	<p>1 SONOS, INC. vs. GOOGLE LLC</p> <p>2 DOUGLAS SCHMIDT (#5686109)</p> <p>3 E R R A T A S H E E T</p> <p>4 PAGE__ LINE__ CHANGE__</p> <p>5</p> <p>6 REASON__</p> <p>7 PAGE__ LINE__ CHANGE__</p> <p>8</p> <p>9 REASON__</p> <p>10 PAGE__ LINE__ CHANGE__</p> <p>11</p> <p>12 REASON__</p> <p>13 PAGE__ LINE__ CHANGE__</p> <p>14</p> <p>15 REASON__</p> <p>16 PAGE__ LINE__ CHANGE__</p> <p>17</p> <p>18 REASON__</p> <p>19 PAGE__ LINE__ CHANGE__</p> <p>20</p> <p>21 REASON__</p> <p>22</p> <p>23</p> <p>24 WITNESS Date</p> <p>25</p> <p style="text-align: right;">Page 293</p>